REMARKS

The Office Action requested amendments to the claims under 35 U.S.C. § 112, which has now been accomplished. It is believed that the present claims comply with 35 U.S.C. § 112.

The Office Action further indicated that Claims 17 and 31-34 represented a double patenting issue. Claims 35-39 have been cancelled to remove this issue.

The present application is entitled to a priority date of January 28, 1999 based on the content of Japanese Application 11-20701. Applicants are hereby submitting a verified English translation of the priority document and wish to bring to the attention of the Examiner that the subject matter of the newly drafted Claims 51-56 is supported by the disclosure of the Japanese priority document, and accordingly, the *Murai et al.* reference as prior art is moot with regards to the newly drafted claims.

The present invention seeks to provide a higher luminescence in an economical manner while complying with the current standards required in this competitive industry. In essence, the present invention seeks to match the performance of cathode ray tubes while enabling a lightweight thin plasma display panel.

Thus, the present invention provides an alternating current-type surface discharge plasma display panel having a specific dielectric layer made of two different sets of material such as by laminating two different dielectric materials to form the dielectric layer. The thickness of the dielectric layers is kept relatively thinner than that of a conventional plasma display panel in order to increase the luminance and luminescence efficiency. Such a panel structure employing a laminated dielectric layer of two different sets of material can support an equivalent electric field strength of 37V/cm • Pa or more in selected discharge spaces when the predetermined sustaining voltage is applied. The ability to support a stronger electric field enables a generation

of high energy electrons and an excimer with a wavelength of 173 nm in the discharge field. Thus, the Xenon molecular beam will have a higher exciting efficiency of phosphorous towards ultraviolet light than the Xenon resonance line.

Our presently pending independent claims define a specific dielectric layer formed of two different sets of material to enable this ability by permitting the manufacturer to adjust the thickness ratio of each dielectric layer and to select appropriate separate dielectric materials for each layer. This enables the manufacturer to facilitate the selection of a desired dielectric constant for the dielectric layer in a comparatively low range of 6 or more and less than 9.

The Office Action contended that each of the outstanding claims was anticipated by the *Murai et al.* patent. The *Murai et al.* reference does not recognize these advantageous features nor teach laminating at least two different dielectric materials in a similar fashion to achieve the purposes of the present invention. References can be made, for example, to Page 36, Line 17, through Page 37, Line 12, of our application that show examples of dielectric glass material to provide a two-layered structure, thereby enabling the permittivity for the entire dielectric layer to be kept low, and as can be readily appreciated, can also be appropriately adjusted since two separate materials having different permittivity can be utilized.

Closely reviewing the teaching in the *Murai et al.* reference relative to the presently amended claims discloses in Embodiment No. 2, Figure 13, simply a laminate of two dielectric layers 62 and 64 made respectively of a lead glass or other glass material. As can be seen in Column 16, Lines 45-48, and in Column 18, Lines 6-12, the first and second dielectric layers are formed from the same material.

This teaching can be compared with the selection of dielectric material as set forth, for example, in our Table examples 1-20, where a combination of PbO glass and ZnO glass, as set

forth at Lines 17-22 on Page 36 of our Specification, can be utilized. Thus, the present invention teaches that a second depositing of a different dielectric glass layer should have a lower softening temperature than the first dielectric layer.

As the Examiner is aware, this is a relatively crowded and competitive field with a large number of highly skilled engineers and scientists attempting to improve plasma display panels while manufacturing them in an economical manner to compete with standard cathode ray tube performances while matching the cost range of such products. As such, advancements in this field that address these issues should be recognized with patent protection since such advancements are not obvious given the highly competitive and intense technical review of this subject matter.

With regards to the newly drafted Claims 51-56, the rejection of the *Murai et al.* '943 patent is not relevant since the earliest publication date is February 25, 1999, which is after our priority date of January 28, 1999. The newly drafted claims, therefore, are distinguishable over the *Murai et al.* reference and further define the advantageous effect of defining the relationship as set forth on Page 22 and Page 47 of our Specification relative to the Xenon gas excimer compared to the ratio of the Xe resonant line in the ultraviolet light.

///

///

///

///

///

///

///

It is believed that the present application is now in condition for allowance, and an early notification of the same is requested. If the Examiner believes that a telephone interview will help further the prosecution of this case, he is respectfully requested to contact the undersigned attorney at the listed telephone number.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on March 8, 2004.

By: James Lee

Signature

Dated: March 8, 2004

Very truly yours,

SNELL & WILMER L.L.P.

Joseph W. Price
Registration No. 25,124
1920 Main Street, Suite 1200
Irvine, California 92614-7230
Telephone: (949) 253-4920